

WHAT IS CLAIMED IS:

1. A system for reducing swimming pool energy consumption comprising:
 - (a) a filter system for cleaning a pool, the pool having walls and water contained within the walls, said filter system being of the type wherein a water circulation path is provided, the path including an inlet from the pool, an outlet for discharging water into the pool, a centrifugal pump, and a filter between the inlet and outlet;
 - (b) the inlet having a first source and a second source, the first source comprising a skimmer for receiving water and debris skimmed from the surface of the water and the second source comprising a suction vacuum for receiving water and debris from the walls of the pool;
 - (c) valve means for switching the inlet from the first source to the second source and from the second source to the first source;
 - (d) actuating means coupled to said valve means, the actuating means having a first and second position, the first position manipulating the valve means to receive water from the first source and the second position manipulating the valve means to receive water from the second source;
 - (e) programmable input means for controlling the actuating means;
 - (f) a motor coupled to the centrifugal pump, the motor having a speed of less than 3450 revolutions per minute; and
 - (g) bypass means for allowing the inlet to receive water from the first source when said actuating means is in the second position.
2. The system of claim 1 wherein the motor has a speed of approximately 1725 revolutions per minute.
3. The system of claim 1 wherein the valve means is a diverter valve.
4. The system of claim 1 wherein the bypass means comprises a bypass valve connected between the first source and second source.
5. The system of claim 1 wherein the programmable input means is a timer of the variety which energizes an electrical circuit for a preset time period each day.

6. The system of claim 5 wherein the timer causes the actuating means to switch from the first position to the second position.
7. A system for reducing swimming pool energy consumption comprising:
- 5 (a) a filter system for cleaning a pool, the pool having walls and water contained within the walls, said filter system being of the type wherein a water circulation path is provided, the path including an inlet from the pool, an outlet for discharging water into the pool, a centrifugal pump, and a filter between the inlet and outlet;
- 10 (b) the inlet having a first source and a second source, the first source comprising a skimmer for receiving water and debris skimmed from the surface of the water and the second source comprising a suction vacuum for receiving water and debris from the walls of the pool;
- (c) valve means for switching the inlet to receive water from the first source and the second source to receive water primarily from the second source;
- 15 (d) actuating means coupled to said valve means, the actuating means having a first and second position, the first position manipulating the valve means for the inlet to receive water from the first source and the second source, and the second position manipulating the valve means for the inlet to receive water primarily from the second source;
- 20 (e) programmable input means for controlling the actuating means; and
- (f) a motor coupled to the centrifugal pump, the motor having a speed of less than 3450 revolutions per minute.
8. The system of claim 7 wherein the valve means is an in-line valve.
9. The system of claim 8 wherein the in-line valve comprises:
- 25 (a) a tee-shaped valve body, the body having a first axis defined by a first leg and a second leg opposite the first leg and a second axis defined by a third leg, the third leg perpendicular to the first leg and second leg and the second axis perpendicular to the first axis;
- (b) an inlet formed by the first leg of the tee and an outlet formed by the second leg of

the tee;

- (c) a stationary plate having a first face, the first face having a first plurality of openings, the stationary plate attached within the valve body with attachment means such that the first face is perpendicular to the first axis and parallel to the second axis;
 - (d) a sliding plate having a second face, the second face having a second plurality of openings, the sliding plate slideably attached within the valve body such that the sliding plate is parallel to and abutting the stationary plate, and slideable in the direction of the second axis, a flow area created by the positioning of the second plurality of openings with respect to the first plurality of openings, the flow area having a maximum size and a minimum size;
 - (e) wherein the actuating means is attached to the sliding plate for sliding the sliding plate in a direction parallel to the second axis, the actuating means activated by an electrical current, wherein the flow area is having the minimum size when the actuating means is activated;
 - (f) biasing means attached to the sliding plate, said biasing means maintaining the flow area at the maximum size when the actuating means is not activated; and
 - (g) sealing means for sealing the third leg.
10. The system of claim 9 wherein the actuating means comprises a solenoid, the solenoid having a solenoid coil and a solenoid plunger, and an operating rod having a first end connected to the plunger and a second end attached to the sliding plate.
11. The system of claim 9 wherein the motor has a speed of approximately 1725 revolutions per minute.
12. A method of reducing swimming pool energy consumption comprising the steps of:
- (a) cleaning water from a pool with a filter system, the pool having walls and water contained within the walls, said filter system being of the type wherein a water circulation path is provided, the path including an inlet from the pool, an outlet for discharging water into the pool, a centrifugal pump, and a filter between the inlet and outlet;

(b) configuring the inlet to receive water from a first source and a second source, the first source comprising a skimmer for taking water and debris skimmed from the surface of the water and the second source comprising a suction cleaner for taking water and debris from the walls of the pool;

5 (c) using valve means, switching the inlet from receiving water from both the first source and the second source to receiving water primarily the second source, said valve means being switched by actuating means coupled to the valve means, the actuating means having a first and second position, the first position setting the valve means to receive water from the first source and the second source and the
10 second position setting the valve means to receive water primarily from the second source;

(d) controlling the actuating means with programmable input means, so that the actuating means is switched from the first position to the second position for a time period entered into the programmable input means and following said time
15 period the actuating means is switched from the second position to the first position; and

(e) driving the centrifugal pump with a motor coupled to the centrifugal pump, the motor having a speed of less than 3450 revolutions per minute.

13. The method of claim 12, the motor having a speed of 1725 revolutions per minute.